In the Supreme Court of the United States

OCTOBER TERM, 1970

No. 970

MINNESOTA MINING AND MANUFACTURING COMPANY,
Petitioner,

v.

NORTON COMPANY,
STUDEBAKER-PACKARD CORPORATION,
HADCO CORPORATION,
Respondents.

On Petition for Writ of Certiorari to the United States Court of Appeals for the Sixth Circuit.

APPENDIX TO PETITION FOR CERTIORARI.

Thomas V. Koykka,
William S. Boston,
Arter & Hadden,
1144 Union Commerce Building,
Cleveland, Ohio 44115,

Edward A. Haight,
Haight, Hoxsey & Davis,
2320 Board of Trade Building,
Chicago, Illinois 60604,

Harold J. Kenney,
Stanley G. DeLaHunt,
Kenney, Albertson, Ellis, Seidler & DeLaHunt,
2501 Hudson Road,
St. Paul, Minnesota 55101,
Counsel for Petitioner.

November 17, 1970.

THE BYRON LAWYER PRINTING CO., CLEVELAND, OHIO—CHERRY 1-7777

TABLE OF CONTENTS.

	Page
Opinion of Court of Appeals in Decision under review, entered June 1, 1970, 426 F.2d 1117	1
Judgment under review, entered June 1, 1970	11
Order with respect to rehearing, entered June 19, 1970	12
Order denying rehearing, entered August 25, 1970	13
Opinion of the District Court, entered December 28, 1968, 280 F. Supp. 674	15
Memorandum of the District Court, overruling motions for new trial and to amend findings and judgment, entered January 29, 1968, 280 F. Supp. 697	58

OPINION OF COURT OF APPEALS IN DECISION UNDER REVIEW.

426 F.2d 1117.
Entered June 1, 1970.

Nos. 18596, 18597

UNITED STATES COURT OF APPEALS
FOR THE SIXTH CIRCUIT.

MINNESOTA MINING & MANUFACTURING COMPANY,
Plaintiff-Appellant,

v.

NORTON COMPANY, STUDEBAKER-PACKARD CORPORATION, HADCO CORPORATION,
Defendants-Appellees.

APPEAL from the U. S. District Court for the Northern District of Ohio.

Before O'SULLIVAN*, EDWARDS and COMBS, Circuit Judges.

O'SULLIVAN, Circuit Judge. On this appeal Minnesota Mining & Manufacturing Company asks reversal of a judgment of the United States District Court for the Northern District of Ohio, Eastern Division, holding invalid Minnesota's U.S. Patent No. 2,958,593. Minnesota had sued Norton Company, Studebaker-Packard Corporation, and Hadco Corporation for damages for alleged infringement of the said patent, identified as the Hoover Patent. Defendants filed a cross-appeal from the District Court's failure to award attorney fees as permitted by Title 35 USC § 285.[1]

---

* Judge O'Sullivan, now a senior judge, was an active Circuit Judge at the time this case was submitted for decision.

[1] § 285: "The Court in exceptional cases may award attorney fees to the prevailing party."

The adversaries will be identified as Minnesota, appellant and cross-appellee, and Norton, appellee and cross-appellant. The case was tried to the Honorable Ben C. Green, whose opinion is reported as *Minnesota Mining & Manufacturing Co. v. Norton Co.*, 280 F. Supp. 674 (N.D. Ohio E.D. 1967, 1968).

We affirm upon the District Court opinion, including his denial of plaintiff's motion for a new trial.

I. Invalidity of the Hoover Patent.

The District Judge denied validity to the patent because of his view that whatever advance over the prior art there may have been in the Hoover patent, such advance would have been obvious to a person having ordinary skill in the relevant art. Under Title 35 USC § 103,[2] Hoover was, therefore, not entitled to a patent.

The District Judge concluded "It is this Court's finding that United States Letters Patent No. 2,958,593 are invalid for lack of invention."

For many years, prior to 1952, the courts, by their decided cases, had denied the quality of invention to improvements over prior art which would at the time have been obvious to one skilled in the art. In 1952 Congress added § 103 to the patent law so as to give statutory recognition of that "impalpable something" which the courts had long required for "invention." *Hotchkiss v. Greenwood*, 52 U.S. 248, 13 L. Ed. 615 (1850); *McClain v.*

---

[2] § 103. **Conditions for patentability; non-obvious subject matter.**

"A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made."

Ortmayer, 141 U.S. 419 (1891); *Harvey v. Levine*, 322 F(2) 481, 485 (6th Cir. 1963). In the context of his opinion, we read the District Judge's language that the Letters Patent here involved "are invalid for lack of invention" as an application of Section 103 to the Hoover Patent.

The device which is the subject of the patent before us is described in appellant Minnesota's brief to this Court as follows:

> "The invention relates as the patent styles it, to a 'low density open non-woven fibrous abrasive article'—i.e., an abrasive material made up in various forms, shapes and sizes, for a variety of uses in the abrasives field. It has found wide use, especially in industrial metal finishing, polishing and buffing operations, in cleaning off mill scale in steel making, in cleansing operations in the dairy industry and in hospitals, in floor maintenance in office and public buildings, and in the household and kitchen as a scouring pad."

The product made under the Hoover Patent was marketed by Minnesota under the brand name of "Scotch-Brite." Norton's allegedly infringing product carries the name "Bear-Tex." Minnesota's Hoover patent was issued June 10, 1960. Complaint was filed in this suit August 28, 1961. There followed extensive contesting on matters of substance and procedure, generating some 127 docket entries. Skilled advocates employed the ever-multiplying devices born of today's experimentation at simplifying and reducing the cost of litigation—interrogatories, discovery, pretrial, demands for admissions and productions, motions for summary judgment, etc. Counsel for defendant Norton, disappointed that his success was not sweetened by the allowance of attorneys' fees, attributed the District Judge's failure to discuss that issue to Judge Green's likely feeling that "enough judicial time had been ex-

pended on the case." Such, indeed, would be an understandable emotion.

The defendants once had won their case when another District Judge dismissed Minnesota's complaint for failure to timely apply for and obtain a license for the filing of applications for foreign patents as required by Sections 184 and 185 of the Patent Act, Title 35 USC §§ 184, 185. See *Minnesota Mining & Manufacturing Co. v. Norton Co.*, 240 F. Supp. 150 (N.D. Ohio E.D. 1965). We, however, reversed and remanded for trial on the merits. *Minnesota Mining and Manufacturing Co. v. Norton Co.*, 366 F(2) 238 (6th Cir. 1966).

Believing that the opinion of the District Judge on remand quite adequately exposes and discusses the issues of the case, we will not undertake dissertation on the total case. The District Judge reviewed the prior relevant art. Although he noted that the Hoover Patent could not be said to have been directly anticipated by the prior art, he concluded that the disclosures of the earlier patents were such that with the arrival of nylon, as an agent to replace some of the less advantageous materials used in the earlier patents, any advance made by the Hoover patent was obvious. Two operations seem to be basic to the Hoover patent—first, the making of a web or wad (sometimes called a batt) to receive the abrasive agents, and second, the introduction of the abrasive agents into such web. The District Judge was of the opinion that two earlier patents, Loeffler and Maisel, both described the first step, and their respective methods were obviously improved upon by Hoover when nylon became available. The Loeffler patent was cited to the patent office by the Hoover application; the Maisel patent was not.

The Maisel patent was pertinent only to the making of the web. It recited that:

> "This invention relates to an insulating batt [web] of great resilience and loft, particularly suitable for use as an interlining for clothing, as an air or gas filter, and as a packing material for delicate objects."

Of this patent, the District Court said:

> "This patent does not cover an abrasive article, but rather is on an 'insulating batt' or mat, or web, of 'great resilience and loft.' Without reciting in detail from the patent, this Court is convinced that the Maisel patent discloses and claims a bonded web structure essentially the same as is incorporated in the Hoover patent. The essential difference between the Maisel and Hoover patents is the absence of abrasive in Maisel."

Although the Loeffler patent was cited to the patent office, the District Judge found that Hoover's discussion of it in his application, whether deliberately or not, misrepresented its content and direction. Loeffler called his invention a "non-metallic fibrous abrasive wad [web] and method of producing same."

At trial, Minnesota's expert, LePage, prepared an exhibit claimed to have been made according to the teaching of Loeffler. He employed jute waste as one of its components. Norton's expert, Rowe, produced a competing exhibit also portraying Loeffler, except that he used nylon and wool in place of jute waste. The Loeffler application provided that base materials other than jute waste could be employed, such as "sisal waste * * * wool waste or the like," and said that,

> "The fibrous material may suitably comprise that derived from various vegetables or animal sources which provide filaments of substantial length and form adapted to readily entangle together into a more or less loosely matted and compacted mass."

The District Judge concluded that the Rowe exhibit was a correct portrayal of the Loeffler patent with nylon and wool substituted for jute waste. This critical finding, among others, led to the District Judge's conclusion that substituting nylon, with its expanding uses and availability, for jute waste, was an advance over the prior art that would have been obvious to one skilled in the art. Of this, the District Judge said:

> "There can be no invention in an obvious substitution of new materials for old in a known combination. Seiberling Rubber Co. v. I.T.S. Co., 134 F.2d 871, 875 (CA 6, 1943). A peculiarly appropriate precedent cited by defendant in this regard is the decision in S.O.S. Co. v. Triangle Mfg. Co., 156 F. Supp. 665 (D.C. N.D. Ill. 1957), aff'd General Foods Corp. v. Triangle Mfg. Co., 253 F.2d 227 (CA 7, 1958), wherein a patent on a plastic scouring pad was held invalid. Therein it was stated:
>
> > 'Where a patented article, by virtue of a substituted material, differs from the old article in degree of excellence only, where it merely accentuates, or achieves to a greater degree, desirable qualities possessed to a less degree by the old article, *and where the alleged new properties or wider range of uses claimed for the patented article were not unexpected or surprising in view of the known properties or characteristics of the substituted materials*, patentable invention cannot exist.' *id.* at 672. (Emphasis added).
>
> "The particular pertinence of the foregoing can best be appreciated by reference back to the LePage testimony regarding the deficiencies of jute (in the pre-nylon era) and the teachings of the Englund and Rimer patents regarding the inherent advantages of utilizing new plastic synthetics in a scouring pad. See also Martin-Marietta Corp. v. United States, 373 F.2d 972 (Ct. Cl., 1967), wherein the substitution of nylon

for an old ingredient producing an improved commercial product was held to lack invention as being an obvious advance in the art." 280 F. Supp. at 691, 692.

Prior patents also teach something about adding an abrasive and adhesive mix into a web of varying degrees of openness. The Hurst, Englund, Rimer, Benner, and, again, Loeffler patents all point toward the concept and means described by the Hoover patent. Indeed a prior public use, the Fiberbond product, was manufactured by incorporating solids into a non-woven web, created on a Rando-Webber machine,[3] by adding them to an adhesive mix sprayed into the web. The step of substituting abrasive for other solids in the spray, in light of the prior art, can at best be viewed as a small and obvious advance.

In addressing us, the parties engaged in the current discussion as to whether determination of non-obviousness required by Section 103 involves a question of fact or law. Appellant Minnesota says that the total of the District Judge's rulings involve questions of law, all open to our review; appellee Norton argues that basically the District Court findings are factual, and, under Rule 52(a) cannot be disturbed unless we find that they are "clearly erroneous." This Circuit had said it both ways. See, e.g., *Monroe Auto Equipment Co. v. Heckethorn Mfg. & Supply Co.*, 332 F(2) 406, 411 (6th Cir. 1964), *cert. denied*, 379 U.S. 888, on the one hand and *Maytag Co. v. Murray Corp.*, 318 F(2) 79, 81 (6th Cir. 1963), on the other. *Monroe Auto Equipment* is now the law of this Circuit. There Judge Phillips exposed the nuances involved in the subject and carefully delineated which parts of a District

[3] The Rando-Webber machine was used by both Minnesota and Norton in the production of the web into which abrasives were intruded. The patents on this machine were not owned by any of the parties to this case.

Judge's findings in such cases are fact and which are law. Judge Phillips' treatment of the subject was approved and his opinion cited in *Graham v. John Deere Co.*, 383 U.S. 1, 36 (1965). There the Supreme Court avoided overprecision by saying:

> "While the ultimate question of patent validity is one of law, *A. & P. Tea Co. v. Supermarket Corp.*, supra, at 155, the § 103 condition, which is but one of three conditions, each of which must be satisfied, lends itself to several basic factual inquiries. Under § 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background, the obviousness or nonobviousness of the subject matter is determined." 383 U.S. at 17.

The Supreme Court command in *Great A. & P. Tea Co. v. Supermarket Equip. Co.*, 340 U.S. 147 (1950), still may be the clearest indication of the proper nature of our appellate review:

> "The Court now recognizes what has long been apparent in our cases: That it is the 'standard of invention' that controls. That is present in every case where the validity of a patent is in issue. It is that question which the Court must decide. No 'finding of fact' can be a substitute for it in any case. The question of invention goes back to the constitutional standard in every case. *We speak with final authority on that constitutional issue as we do on many others.*" 340 U.S. at 156. (Emphasis added.)

In Section 103, Congress has merely outlined a somewhat functional inquiry into "obviousness" as opposed to "invention."

We are satisfied that to the extent that the District Judge's conclusions involved findings of fact, he was not

clearly erroneous; also we consider that he correctly applied familiar rules of patent law.

II. Attorney Fees.

Norton, as cross-appellant, entreats us to cap its victory with an award of attorney fees and to add fraud committed on the patent office by Minnesota as an additional ground for invalidating the Hoover Patent. The prayer of cross-appellant's brief says:

> "Norton submits that the Plaintiff-Appellant Minnesota should be found guilty of misconduct and unclean hands in the procurement of its patent, and specifically in the procurement of its retroactive foreign filing license. The patent is infected in its entirety by the misrepresentations made to the Patent Office.
>
> "As a result, Minnesota cannot be entitled to any findings of validity or infringement of its patent, and Norton is entitled to attorneys' fees for having been put to the expense of the defense of this *unfair* litigation."

The District Judge refused to find the intentional fraud necessary to such relief. We will not do so. In our first opinion, 366 F(2) 238, *supra*, we noted that the patent office made a finding that Minnesota's premature filing of applications for foreign patents was due to inadvertence and that the involved patent did not involve the national security. We sustained the patent office grant of a retroactive license for the filing of applications for foreign patents.[4] At trial, and now presented to us, are parts of Minnesota's files which Norton claims exhibit that

---

[4] "§ 154. **Filing of applications in foreign country.** * * * The license may be granted retroactively where an application has been inadvertently filed abroad and the application does not disclose an invention within the scope of section 181 [national security] of this title."

Minnesota's claim of inadvertence was gross deceit of the Patent Office. Notwithstanding the fury of Norton's attack we find it without merit. It would be preposterous to believe that the patent lawyers and law firms representing Minnesota would, except through inadvertence, hazard what they believed were valid and important patents of their clients, by deliberate and pointless fraud upon the Patent Office. The involved patents did not involve the national security and the needed license for early foreign filing could readily be obtained.

Even if we viewed Minnesota's conduct in withholding these files from the patent office as less than the absolute honesty and good faith disclosure owed the patent office, *Charles Pfizer & Co. v. FTC*, 401 F(2) 574, 579 (CA 6, 1968), we would not award attorney fees to Norton. Such fees are awarded, in the Court's discretion, to prevent gross injustice to the prevailing party. Norton performed a public service in helping to show the invalidity of the Hoover patent in this litigation. But Norton's own attempts to secure a patent on any developments contained in its own "Bear-Tex" product—a copy of Minnesota's "Scotch-Brite" products—added considerable difficulty to the resolution of this case. Norton represented to the patent office and the public that "Bear-Tex" was a revolutionary product. Thus the District Judge was forced to pierce the excessive claims of Norton, as well as those of Minnesota, to protect the public interest from the grant of a patent monopoly which would "remove existent knowledge from the public domain." See *Graham v. John Deere*, 383 U.S. at 6.

The relief sought by Norton's cross-appeal is denied.

The judgment of the District Court is affirmed. Each party will pay its own costs on this appeal.

JUDGMENT UNDER REVIEW.

Entered by the Court of Appeals on June 1, 1970.

UNITED STATES COURT OF APPEALS

FOR THE SIXTH CIRCUIT.

No. 18,596.

MINNESOTA MINING AND MANUFACTURING COMPANY,
Plaintiff-Appellant,

VS.

NORTON COMPANY, STUDEBAKER-PACKARD CORPORATION AND HADCO CORPORATION,
Defendants-Appellees.

BEFORE: O'SULLIVAN, EDWARDS and COMBS, Circuit Judges.

JUDGMENT.

APPEAL from the United States District Court for the Northern District of Ohio.

THIS CAUSE came on to be heard on the record from the United States District Court for the Northern District of Ohio and was argued by counsel.

ON CONSIDERATION WHEREOF, It is now here ordered and adjudged by this Court that the judgment of the said District Court in this cause be and the same is hereby affirmed.

Each party will pay its own costs on appeal.

Entered by order of the Court.

CARL W. REUSS,
Clerk.

ORDER WITH RESPECT TO REHEARING.

Entered June 19, 1970.

No. 18,596

UNITED STATES COURT OF APPEALS

FOR THE SIXTH CIRCUIT.

MINNESOTA MINING & MFG. CO.,
Plaintiff-Appellant,

v.

NORTON COMPANY, *et al.*,
Defendants-Appellees.

Before EDWARDS, Circuit Judge, and O'SULLIVAN, Senior Circuit Judge.

THIS CAUSE is now before the Court upon plaintiff-appellant's petition for rehearing in banc, filed in this Court on June 15, 1970, and upon due consideration thereof,

IT IS ORDERED (1) that defendants-appellees, Norton Company, et al., within 30 days from this date file with the Clerk of this Court, in the usual number and style of reply briefs, a reply to the appellant's petition for rehearing in banc; and said reply brief shall be responsive to the contention that the long-time study by the Norton Company of the claimed invention of the Hoover Patent is demonstrative of the fact that the Hoover conception was not something that would have been obvious to a person having skill in the art;

(2) plaintiff-appellant shall have 20 days after the filing and service of the said brief by defendants-appellees within which to make response thereto; and

(3) the time within which any member of this Court may suggest a rehearing in banc of this case is hereby extended for a period of 10 days after receipt of the last of the briefs heretofore ordered.

Entered by order of the Court.

CARL W. REUSS,
Clerk.

ORDER DENYING REHEARING.

Entered August 25, 1970.

No. 18,596

UNITED STATES COURT OF APPEALS

FOR THE SIXTH CIRCUIT.

MINNESOTA MINING AND MANUFACTURING COMPANY,
Plaintiff-Appellant,

v.

NORTON COMPANY, *et al.*,
Defendants-Appellees.

Before EDWARDS, Circuit Judge, and O'SULLIVAN, Senior Circuit Judge.

THIS CAUSE is before the Court upon the petition of Plaintiff-Appellant, Minnesota Mining and Manufacturing Company, for rehearing and suggestion for rehearing in banc. No request for rehearing in banc has been made by any judge of this Court, and accordingly, the petition has

been considered and is hereby disposed of by a panel consisting of two members of the panel who originally heard the appeal.[1]

Upon due consideration of the petition for rehearing, IT IS ORDERED that the petition of plaintiff-appellant for rehearing in banc and its petition for rehearing are hereby denied.

Entered by order of the Court.

CARL W. REUSS,
Clerk.

---

[1] Honorable Bert T. Combs who, as a Circuit Judge, participated in the original hearing and decision in this matter, had resigned prior to filing of the petition for rehearing. Accordingly, the petition has been heard and disposed of by the other two members of the original panel.

OPINION OF THE DISTRICT COURT.

280 F. Supp. 674.
Entered December 28, 1967.

IN THE DISTRICT COURT OF THE UNITED STATES

NORTHERN DISTRICT OF OHIO
EASTERN DIVISION

Civil Action No. 37,154.

MINNESOTA MINING AND MANUFACTURING COMPANY,
Plaintiff,

v.

NORTON COMPANY,
STUDEBAKER-PACKARD CORPORATION,
HADCO CORPORATION,
Defendants.

GREEN, *J.*:

This is an action alleging infringement of United States Letters Patent No. 2,958,593, hereinafter referred to as the Hoover patent. Claims one through eight, of a total of thirteen claims are in issue herein. Plaintiff is the assignee of the inventors, Howard L. Hoover, Eugene J. Dupre and Walter J. Rankin, each of whom was in plaintiff's employ at the time the patented product was developed.

The patent in suit covers an abrasive pad described in the specifications thereof as follows:

> The present invention relates to non-woven fibrous abrasive articles of extremely open structure having an extremely high void volume (i.e. low density), which articles have a special utility in the floor main-

tenance trade, in hand scouring operations such as performed in domestic kitchens by homemakers, as well as in various industrial abrasive operations.

Claim one of the patent, which plaintiff states is typical of the claims in suit, is as follows:

> 1) An open low-density abrasive article comprising a uniform lofty open non-woven three dimensional web formed of many interlaced randomly extending flexible durable tough resilient organic fibers which have a diameter of from about 25 microns to about 250 microns, web fibers being firmly adhesively bonded together at points where they cross and contact one another to form a three-dimensionally integrated structure throughout said web and abrasive particles distributed within said web and firmly bonded to web fibers by a relatively hard rigid binder, interstices between adjacent fibers being open and substantially unfilled by adhesive binder or abrasive, there being defined throughout said article a tri-dimensionally extending network of intercommunicated voids constituting at least 75 percent of the volume of said article, said article being flexible and readily compressible, and upon release of pressure, capable of recovering substantially completely to its initial uncompressed form.

The commercial products manufactured by plaintiff under the patent bear the trade name "Scotch-Brite." The defendant Norton's [1] products are marketed under the "Bear-Tex" brand.

The patent in suit traces its origins back to an application Serial No. 641,714, filed February 20, 1957. That application, as filed, stated that:

---

[1] Defendant Norton, manufacturer of the accused products, is the primary defendant herein. Defendants Studebaker-Packard Corporation and Hadco Corporation are vendors of such products. For the purposes of this opinion the singular term "defendant" will be used and is intended to refer to defendant Norton only.

This invention relates to non-woven fibrous abrasive articles. More particularly it relates to extremely porous resilient non-woven fibrous skeletal structures which contain abrasive grain.

* * * * *

The article of our invention comprises a non-woven 3-dimensional skeletal network of resilient fibrous members. Adhered to the individual fibrous members and randomly bonding them together are many small globules of adhesive or binder containing abrasive granules. A preferred embodiment of our invention is a rotary wheel-like fibrous abrasive device.

The patent specifications contained four examples of wheels manufactured in accordance with the claims of the application. Each of the said examples disclosed that the starting point of the product was a nylon web manufactured on a machine known as a "Rando-Webber," the said machine being covered by patents to other persons.

The specifications stated that the ratio of total volume of solid material present to the total volume of voids, and the ratio which the solid components bore to each other, was of critical importance to the invention. The range of proper proportions was therein stated. In each of the four previously mentioned examples the applicants noted the extremely high range of void volume the product possessed.

In describing the components to be used in the product the specifications stated that untreated sisal, jute, glass, hemp, asbestos, steel wool, and cotton fibers have proved completely unsatisfactory for the purposes stated.

The original application contained nine claims, claims 10 and 11 being method claims. Claims 1 through 5 did not claim abrasive grain and read on the web structure itself. Claim 6 is representative of the product claims in

which abrasive was claimed a part thereof, and is as follows:

> A strong flexible, resilient abrasive article comprising a non-woven skeletal structure of many fibrous members, said members having a length of from at least about ½ inch to not more than about 4 inches and a diameter from at least about 25 microns, to not more than about 250 microns, a fiber- and mineral-adherent adhesive randomly bonding said members to each other and bonding abrasive grain thereto, said abrasive article containing from at least about 75% to not more than about 95% substantially uniformly distributed voids.

The initial application was rejected as unpatentable over the prior art. After two attempts to convince the patent examiner that the entire claimed invention was distinguishable over the prior art by reason of its disclosure of the high void volumes, the claims embracing abrasive as a component thereof were cancelled without prejudice to further presentation. Thereafter the remaining claims were finally rejected and the application abandoned.

On October 7, 1958, approximately six weeks before the abrasive claims were cancelled in application Serial No. 641,714, a second application for patent was filed on behalf of the same inventors. After some controversy with the Patent Office this second application Serial No. 777,167, was designated as a continuation-in-part of the earlier application. The specifications and claims of the second application were directed solely to abrasive pads with abrasive grain as a constituent thereof. The specifications of Serial No. 777,167 as originally filed are essentially the same as those of the patent in suit, although some additions were made thereto in a third application, Serial No. 1453, on which the patent issued.

The second application as originally filed contained seven claims. Claim 4, which was representative of the original claims, is as follows:

> An open low-density rotary abrasive floor maintenance pad suitable for extremely effective use in floor scouring or polishing operations, in conjunction with rotary floor maintenance equipment, without leaving undesirable residue as it wears through use, capable thereafter of being readily cleaned by simple flushing with water and then wrung out and left overnight or for days or weeks, and then being re-used, said pad comprising a uniform lofty open non-woven three-dimensional web having a thickness in the order of one-fourth inch formed of many interlaced randomly extending flexible durable tough resilient organic fibers which exhibit substantial resiliency and strength upon prolonged soaking in water, web fibers being firmly bonded together at points where they cross and contact one another by globules of a waterproof relatively hard rigid organic binder to form a three-dimensionally integrated structure throughout said web, fiber bonding occurring substantially only at and adjacent to said points, and abrasive particles distributed throughout said web and bonded to web fibers by globules of said binder, interstices between adjacent fibers being open and substantially unfilled by said adhesive or abrasive defining throughout said pad a network of intercommunicated voids comprising at least about 75 percent of the volume of said pad, said pad further being flexible and readily compressible, and upon subsequent release of pressure, capable of recovering substantially completely to its initial uncompressed form.

All claims were initially rejected on the basis that they were broad and indefinite and as unpatentable over the Sternfield Patent No. 2,665,528.

Following that action by the Patent Office, the applicants' solicitors met with the Assistant Primary Examiner and the Examiner, and thereafter filed a response to the rejection. The response reflects that at the meeting samples of the commercial product of the patent were exhibited to the Patent Office representatives. The feature of openness of the product appears to have been the subject of considerable discussion at the interview. The response contained no amendments to the claims,[2] and reconsideration of the rejection was requested.

In response to the request for reconsideration a different examiner again rejected all the claims. His reasons for rejection were:

1) All claims were prolix as they contained long recitations of unimportant details in the preamble which hid or obscured the invention.

2) All claims did not particularly point out and distinctly claim the invention, and were considered too broad and indefinite.

3) All claims were unpatentable over the prior art.

The rejection based upon the prior art included references in addition to Sternfield, but Sternfield was cited as a primary reference, along with Browne Patent No. 2,571,334, in light of Till, Patent No. 2,810,426.

In response to that action the claims were amended to meet the objections of prolixity and indefiniteness. In addition, two new claims were added. With regard to the question of the prior art, a dual argument was advanced. The prior art references cited by the Examiner were distinguished as not disclosing a three-dimensional structure

---

[2] Claim 7, which had been rejected as non-statutory, was cancelled in a separate communication with the Patent Office.

of extreme openness and low density, i.e., with a high void volume, and as covering structures of an entirely different character. It was pointed out that the Sternfield patent related to a disposable cleansing tissue similar to that commonly known as "Kleenex." Heavy emphasis, however, was also placed upon the commercial aspects of the product. It was represented to the Patent Office that:

> Notwithstanding the fact that abrasive structures formed generally of some fibrous material, abrasive grains and a unifying binder have been known for several decades, no one, prior to Applicants' invention has provided the man in the market place, with a commercial product having the important and unique combination of properties provided through Applicants' structures. For example, in the floor maintenance trade, a floor maintenance pad has never been commercially available which is extremely effective in stripping and polishing floors, and yet which does not leave undesirable residue through use, which could be readily cleaned by simple rinsing in water and then wrung out and left for long periods of time, then re-used. In the pickling line in the steel mill, no structure for cleaning out pits and crevices in the steel prior to pickling has ever been present which would work so fast, so effectively.
>
> * * * * *
>
> Moreover, over the last 50 years many patents have issued relating to structures made up (in one form or another) of fibers, abrasive binder, and abrasive grains. Several of these patents have been cited in Applicants' specification. See for example page 3 of Applicants' specification. On the other hand, over an equally long period or longer, many patents and publications, just as pertinent as the Browne patent have issued relating to batt materials.
>
> * * * * *

> With all this prior art available, no one, insofar as Applicants are aware, has provided the man in the floor maintenance industry, and the man in the industrial abrasives plant with the unique and highly successful structures disclosed in Applicants' application and defined in Applicants' claims. (Emphasis as in original.)

Following that response the Patent Examiner allowed two claims and rejected the remaining four. The rejection was as unpatentable over Till, and was a Final Rejection.

Subsequent to that action another interview was had by counsel with the Assistant Primary Examiner and the Examiner, and further amendments were made to the application. Three of the previously rejected claims were cancelled, and three new claims submitted in their place. The remarks of the amendment reflect that at the interview the Till patent was discussed, and it was contended by Applicants' solicitors that Till was not concerned with abrasives at all, and in fact covered no structure, but was in fact a method patent. The remarks further indicate that the openness and low density of the Applicants' structures was again argued to the Patent Office representatives as providing a novel abrasive structure worthy of the grant of a patent. It was stated that the Examiners agreed with that position, subject to amendments being made to certain of the claims to more clearly reflect that fact. The amendments tendered were urged as meeting the standards required by the Examiners at the interview.

The amendments were apparently acceptable to the Patent Office, for on May 4, 1960 a notice of allowance was forwarded by the Patent Office.

While application Serial No. 777,167 was pending a third application was filed on behalf of the same applicants, Serial No. 1453, stated to be a continuation-in-part of the co-pending application SN 777,167. The specifications of

the third application were essentially the same as those of the second application, with some additional disclosures, and five claims were presented in conjunction therewith.

All claims of Application SN 1453 were rejected as unpatentable over the then two allowed claims of application No. 777,167 and also as unpatentable over Till.

Responsive to that action one claim was cancelled, the language of the other four claims amended, and the seven claims which by that time allowed in application No. 777,167 were carried forward by amendment into the third application. It was stated in the response that upon allowance of the third application the second application containing the seven allowed claims would be abandoned.

On June 10, 1960 Notice of Allowance of the third application was sent out, and soon thereafter the second application was formally abandoned. Following the allowance of the application certain technical amendments were made, and on November 1, 1960 United States Letters Patent No. 2,959,393 were issued on Application Ser. No. 1,453.

In evaluating this patent it is essential to delineate between the alleged inventive concept thereof and those features of the structure which are not the product of the inventors.

Although in the prosecution of the patent, and also in the trial of this case, the low density web of the structure has received heavy emphasis, the fact remains that the web per se was not the creation of these inventors. The web is produced on a machine known as a Rando-Webber which is the subject of patents to other persons. Further, the Maisel patent, United States Letters Patent No. 2,874,-132, describes a batt, or web, essentially the same as that utilized in the manufacture of the "Scotch-Brite" and "Bear-Tex" products, without the feature of abrasive grain.

The ingredients of the structure, i.e., the web materials, types of abrasive and types of adhesive binder, are not novel with this invention. The patent itself recites that well-known materials may be utilized, and the claims of the patent are such that plaintiff could not claim any of the materials as being covered thereby.

The methods of manufacture of the product could not be claimed to be the invention of the patent, for the patent contains no method claims. Further, the evidence is quite clear that the methods described in the patent are, in general, disclosed by the prior art.

It appears to the Court, therefore, that all the components of the structures claimed in the Hoover patent are disclosed by the prior art. It accessarily follows, therefore, that the alleged inventive concept of this patent must reside in the bringing together of these known elements in the combination of an open lofty web with abrasive grain therein.

The testimony of Messrs. Hoover and Dupre confirms this conclusion.

Mr. Hoover testified that for many years he had felt a better product than steel wool could be made to perform the same type of cleaning functions. In 1953 he observed an open, lofty web coming off a Rando-Webber, and it occurred to him that the web might be useful as a new technique that might lead to some new products, although he had nothing specific in mind at the time. He then experimented with spraying the web with an adhesive, and was quite surprised to find that it accepted the adhesive and maintained its loft.

Although the web was utilized for experimental purposes on other products, it was not until 1955 that Mr. Hoover began work on its utility as an abrasive pad. Mr. Hoover testified that prior to the adoption of the Rando-

Webber web as the base for an abrasive pad employees of the plaintiff had experimented with introducing other different ingredients into the web for developmental purposes.

He further stated that prior to his work on this product he had had no prior experience in spraying an adhesive and abrasive mix, which was the method he used to incorporate the abrasive grain into the web. Such a procedure was, however, disclosed by the prior art. Although the main thrust of the developmental program was through the use of the spray method, Mr. Hoover also testified that other methods of incorporating the abrasive mix were attempted, including a prior art process known as roll-coating, and the patent is broad enough to cover a product made in a manner other than spraying.

Prior to arriving at the structure which Mr. Hoover considered to be commercially feasible, and which was used in support of the patent application, the developers experimented with many fibers for the web, including natural and synthetic fibers, and many different binders and abrasives. The evidence, in fact, reflects that one of the most substantial problems which the developers had to overcome was finding the most suitable materials and the proper proportions thereof to create a good commercial product, and the development of equipment to carry out the manufacturing process.

In defining what he considered to be the inventive concept of the patent Mr. Hoover testified as follows:

> We have here an open, lofty, abrasive, resilient, fibrous web, * * * the abrasive distributed throughout, well bonded to the fiber. I believe that's new. That's the invention.

It was his further testimony that he also believed that putting adhesive into the open randomly disposed fibers of

a web as it came off a Rando-Webber, which he initially did, was also new. He admitted that he was not familiar with the prior art in this field, and after exhibiting a sample of the product to plaintiff's patent department and explaining its manufacture he was not consulted by the patent department in the course of the preparation and presentation of the patent application.

Further light was shed on the history of this structure by the testimony of Mr. Eugene J. Dupre, a stated co-inventor. He testified that he first became familiar with the basic web when it was being used by the plaintiff for automobile door panel trim. Thereafter he and Mr. Hoover had the idea of incorporating other substances into the web. They drew up a list of eleven possible substances which might be introduced into the web, included in which was "abrasive particles."

Although it appears that the basic concept of combining an abrasive grain with the Rando-Webber web occurred to Mr. Hoover when he first saw the web in 1953, and although the first sample was hand-made by Mr. Hoover and Mr. Dupre around September, 1955,[3] soon after the list of possible additives was drawn, the progress toward a commercial product was slow. On this point, Mr. Dupre testified:

> It was a long period of progression of improvement, oh, over a period of years, but I don't know if I can tell you when we arrived at what you call a good product.

The Court believes, from the record herein, that this slow progression was attributable to solving the mechanics of producing a commercially marketable product.

---

[3] Mr. Dupre testified that this first attempt "didn't work too well," and that the product "was sort of 'kunky' looking."

In considering a combination patent, such as the Hoover patent, the Court must apply a strict construction. *Simplicity Mfg. Co. v. Quick Mfg. Inc.*, 355 F.2d 1012, (CA 6, 1966); *Roberts v. General Motors Corp.*, 228 F.2d 94 (CA 6, 1955). In the landmark decision of *Great A & P Tea Co. v. Supermarket Equip. Corp.*, 340 U.S. 147 (1950) it was stated:

> Courts should scrutinize combination patent claims with a care proportioned to the difficulty and improbability of finding invention in an assembly of old elements. The function of a patent is to add to the sum of useful knowledge. Patents cannot be sustained, when on the contrary, their effect is to subtract from former resources freely available to skilled artisans. A patent for a combination which only unites old elements with no change in their respective functions, such as is presented here, obviously withdraws what is already known into the field of its monopoly and diminishes the resources available to skillful men. id. 152-153.

Many years earlier Justice Bradley stated in *Atlantic Works v. Brady*, 107 U.S. 192 (1883):

> It was never the object of those [patent] laws to grant a monopoly for every trifling device, every shadow of a shade of an idea, which would naturally and spontaneously occur to any skilled mechanic or operator in the ordinary progress of manufactures. id. p. 200.

Although in its most recent consideration of the patent law the Supreme Court was again considering a combination patent, *Graham v. John Deere Co.*, 383 U.S. 1 (1966), the commentary therein which this Court believes is most important herein relates to the element of non-obviousness in general. Therein the Court stated:

Moreover, Congress may not authorize the issuance of patents whose effects are to remove existent knowledge from the public domain, or to restrict free access to materials already available. Innovation, advancement, and things which add to the sum of useful knowledge are inherent requisites in a patent system which by Constitutional command must "promote the Progress of * * * useful Arts." This is the standard expressed in the Constitution and it may not be ignored. id. p. 6.

* * * * *

Patentability is to depend, in addition to novelty and utility, upon the "non-obvious" nature of the "subject matter sought to be patented" to a person having ordinary skill in the art. id. p. 14.

* * * * *

Under § 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background the obviousness or non-obviousness of the subject matter is determined. Such secondary considerations as commercial success, long felt but unsolved needs, failure of others, etc., might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented. As indicia of obviousness or nonobviousness, these inquiries may have relevancy. id. pp. 17-18.

* * * * *

We have observed a notorious difference between the standards applied by the Patent Office and by the Courts. While many reasons can be adduced to explain the discrepancy, one may well be the free vein often exercised by Examiners in their use of the concept of "invention." In this connection we note that the Patent Office is confronted with a most difficult

task. Almost 100,000 applications for patents are filed each year. Of these, about 50,000 are granted, and the backlog now runs well over 200,000. This is itself a compelling reason for the Commissioner to strictly adhere to the 1952 Act, as interpreted here. This would, we believe, not only expedite disposition but bring about a closer concurrence between administrative and judicial precedent. (Emphasis added) id. pp. 18-19.

The Supreme Court also quoted from the Congressional reports on § 103 of the 1952 Patent Act, wherein it was stated:

> An invention which has been made, and which is new in the sense that the same thing has not been made before, may still not be patentable if the difference between the new thing and what was known before is not considered sufficiently great to warrant a patent. * * * If this difference is such that the subject matter as a whole would have been obvious at the time to a person skilled in the art, then the subject matter cannot be patented. id. pp. 14-15.

Applying the foregoing standards to the patent in suit, the Court has reached the conclusion that the patent is invalid, in that the alleged inventive concept thereof should have been obvious to one skilled in the art.

Before discussing the relevant prior art, a key historical fact should be set forth. Although the patent does not claim any specific fiber for its web, it does recite nylon and polyesters such as "Dacron" as preferred components. The commercial products manufactured under the patent primarily use nylon for their webs and the Court believes the use of the nylon base for the web is essential to the quality of the said products.

Although plaintiff, in its brief filed herein, states that one of the defendant's witnesses admitted that nylon was

commercially available in 1939, that contention is not an accurate reflection of the record. The witness stated that nylon as a commercially available product was described in 1938, first came on the market in a limited fashion as women's hosiery in 1939, but did not become available in any significant quantities as nylon textile waste until about 1947 or 1948. Another witness testified that nylon waste did not become available in commercial quantities until the early 1950's, although it was known prior to that time.

In considering the prior art the Court has, for the purposes of this opinion, separated same into three categories:

(1) Prior art not before the Patent Office;

(2) Prior art before the Patent Office;[4]

(3) Prior public use.

PRIOR ART NOT BEFORE PATENT OFFICE.

Several patents have been cited to the Court which were not before the Patent Office in conjunction with any of the three applications leading to the patent in suit.

U. S. Letters Patent No. 2,284,739 were issued to E. Hurst on June 2, 1942, being a method patent relating to the manufacture of webs of flexible abrasive material. This patent is one of a group referred to as backless sandpaper patent, and does teach and claim a dense, compacted product. The Court believes, however, that certain disclosures thereof are important to the state of the art as it regards the patent in suit. In his method Hurst discloses the production of a light, open uncompacted web

---

[4] The terms "before the Patent Office" and "not before the Patent Office" are used by reason of the fact that there is a considerable controversy as to the actual consideration by the Patent Office of certain prior art references cited in the Hoover patent applications and specifications.

formed of loosely adhering independent fibers of natural fibers or synthetic materials into which an adhesive-abrasive mixture is introduced. He states that "The mixture of abrasive grain and adhesive binder readily penetrates the interstices of the web and permeates throughout." The method of introducing the adhesive-abrasive binders into the web which he describes is that of roll-coating, although the patent claims are not restricted to that method. *Hurst then teaches a compacting of this previously open web.*

It is on this basis of a compacted web that plaintiff differentiates Hurst from the patent in suit. While this is correct, the Court must note the similarity of concept between Hoover and Hurst up to the compacting step, including the critical aspect of the combined adhesive-abrasive binder.

Another relevant patent is Rimer, No. 2,375,585, issued May 8, 1945. Rimer relates to "improvements in the manufacture of scouring pads and, more particularly, to fibrous masses of such material/and a method of producing the same from extruded molten plastic materials containing an abrasive scouring substance." Although this patent does not specifically disclose an open structure with the particularity of the Hoover patent, it does refer to the production of a fibrous pad-like mass which, *if flattened*, can be rolled into the form of a tubular batt. This would indicate a degree of openness in the original pad. Rimer discloses the introduction of an adhesive binder into the pad by either dipping or spraying (P. 2, Col. 1, Lines 10-17).

The Rimer patent also states that:

> Pads made by any of the foregoing methods are strong and durable in that they are unaffected by water, will not readily disintegrate, are free from rusting

> characteristics, do not transfer finely divided splinters to the hands of the user and, particularly, are entirely free from characteristic odors such as those which adhere to conventional forms of pads shortly after use.

These are the same virtues which are stated to be inherent in the Hoover structures. Of particular interest is the statement that the pad would be free from odor. This is another indication that an open structure is described, for in discussing the Hoover patent it was pointed out that its openness permitted flushing of food particles, which if trapped in a closed pad decompose and produce annoying odors.

Another patent of substantial interest not before the Patent Office is that to L. H. Englund, No. 2,413,551, dated December 31, 1946. The Englund patent "pertains to plastic abrasive spongiform cleansing or scouring pads and a method for manufacturing the same."

Englund describes the creation of a plastic spongiform mass having an irregular shape and intricate pattern, into which abrasive material is introduced. (Col. 2, lines 24-36.) He states that spraying of the filaments and abrasive is his preferred method. The patent specifications contain a full exposition of the claimed advantages of his pad, and they are essentially the same as those attributed to the Hoover patent structures. As to the exact character of the pad, neither the specifications nor the claims contain disclosures specifically teaching the open, lofty, low-density web of the patent in suit. The Englund patent does, however, refer to the pad as resilient and states in the specifications:

> Since the filaments are still in a plastic state for a short time after they are deposited, the abrasive material will not only coat each individual thread but

become impregnated therein. After a suitable thickness of the spongiform fibrous mass has been built up upon the reciprocating member, the various overlapping and adjacent threads *at their points of* contact will have begun to set or cool and become welded together. (Emphasis added.)

Similarly, Claims 3, 4, 7, 8 and 9 claim structures where the filaments meet at points of contact, indicating that the structures are not compressed and unitized. Claims 5, 8 and 10 claim structures providing an interstitial mass, further indicating a degree of openness in the structure. There is no specific disclosure or teaching of compression of the Englund structure, as there is in the Hurst patent, previously discussed herein, or as in certain patents cited to the Patent Office in the Hoover application.

Plaintiff contends that Englund is distinguishable from the patent in suit in that Englund fills the interstices with an abrasive substance, whereas Hoover teaches bonding the abrasive to the fibers and leaving the interstices of the web structure open and substantially unfilled by adhesive binder or abrasive. The Englund structure is also distinguished on the basis of a web structure entirely different from that of Hoover.

As to the variation in web structures, that is not a sufficient basis of differentiation. The Hoover patent cannot, and does not, claim the web structure as a creation of its inventors. As to the plaintiff's claim that Englund teaches a pad with the interstices filled by abrasive, the Court has carefully read the Englund claims and specifications and nowhere finds a statement that the interstices are, or should be, filled with abrasive. With regard to plaintiff's assertion that Englund does not teach bonding the abrasive to the filaments, the Court believes that the

statement in Englund that the deposition of the abrasive materials on the filaments causes the filaments to be coated and impregnated with abrasive does disclose a bonding technique. Claim 6 of Englund reads on:

> An article of manufacture, which comprises a spongiform pad composed of a plurality of interwined threads of plastic from a molten plastic mass, said threads being interlocked together into an irregularly dispersed pattern to form an interstitial mass having adjacent and overlying threads autogenuously bonded together, and said mass of threads being coated and impregnated with an abrasive substance.

The Court is of the opinion that a fair reading of this claim does not support plaintiff's arguments regarding the nature of the Englund structure.

An important prior art patent not before the Patent Office is that to E. N. Maisel, No. 2,784,132, March 5, 1957. This patent does not cover an abrasive article, but rather is on an "insulating batt," or mat, or web of "great resilience and loft." Without reciting in detail from the patent, this Court is convinced that the Maisel patent discloses and claims a bonded web structure essentially the same as is incorporated in the Hoover patent. The essential difference between the Maisel and Hoover patents is the absence of abrasive in Maisel.

The evidence in fact discloses that when Mr. Hoover produced an adhesive bonded web, without abrasive, using a web as it came from the Rando-Webber, he believed that he had developed a new product. The specifications of the first Hoover application No. 641,714 described such a product and patent protection thereon was sought in original claims 1, 2, 3, 4, 5, and 10 of the said application. It was the said claims which were eventually abandoned and they cannot now be revived by reading them into the patent in suit as finally allowed.

The Maisel patent is the basis of an argument by defendant that plaintiff was guilty of misconduct before the Patent Office. Defendant contends that plaintiff knew of the existence of the Maisel patent and its importance in relation to the pending Hoover application, but withheld that information from the Patent Office. When an inventor knows of prior art highly relevant to the alleged inventive concept of his claimed invention he has an obligation to disclose that information to the Patent Office. *Minnesota Mining & Mfg. Co. v. Projection Optics Co.*, 256 F. Supp. 354, 365 (D.C. W.D. N.Y., 1966); *United States v. Standard Electric Time Co.*, 155 F. Supp. 949, 952 (D.C. Mass., 1957).

The record is clear that in none of the three Hoover applications is there any mention of the Maisel patent. The record further discloses that plaintiff obtained a copy of the Maisel patent by February, 1958, and that certain of its officers and employees knew of its content.[5] While there is no direct proof, the circumstantial evidence is quite strong that whoever drafted the second Hoover patent application, filed in October, 1958, knew of and borrowed from the Maisel patent in drafting the Hoover application. The second Hoover application, No. 777,167, contains words and phrases that did not appear in the original Hoover application, No. 641,714, which bear a resemblance to, or are identical with, terminology contained in the issued Maisel patent. The possibilities of that being coincidental are highly unlikely.

The Court does not believe that, for the purpose of decision herein, a finding need be made on whether or not plaintiff willfully withheld disclosure of the Maisel patent or whether such action would be fatal to the validity of

---

[5] There is, however, no evidence that any of the three alleged inventors were aware of the Maisel disclosures.

the Hoover patent. The fact does remain that there is no evidence that the Patent Office measured the alleged inventive concept of the Hoover application against the prior art in light of Maisel.

PRIOR ART BEFORE PATENT OFFICE.

Turning now to a consideration of the prior art patents before the Patent Office in the prosecution of the Hoover applications, the Court does not consider the references cited by the Patent Examiner to be particularly significant.

The more pertinent prior art before the Patent Office is that recited in Lines 23 through 32 of Column 2 of the Hoover patent specifications. Cited therein are Hurst patent No. 2,284,738, Benner et al. Patents Nos. 2,284,715 and 2,284,716, Westcott Patents Nos. 1,668,475 and 1,668,476 and Loeffler Patent No. 2,327,199. As to all these patents it is stated that: "*Such references point away from and are antithetical to extremely open abrasive structures of extreme low density.*" Webster's Third Edition of the New International Dictionary (Unabridged) defines antithetical as "marked by direct opposition: exactly opposite."

As to the two Westcott patents, it can be said that they would be considered as antithetical to the Hoover concept. Their conception was a reinforced hard rubber wheel, with abrasive bonded therein. The remainder of the patents under consideration are not quite so diametrically opposed to the Hoover structures.

Although both Benner patents teach a compacted structure as their end products, the said products are "flexible abrasive webs," and not a hard compacted structure. The specifications of each of the said patents recite:

> The present invention, therefore, provides a flexible fibrous abrasive web material in which the abrasive grain is distributed internally of a loose *flimsy* web of any suitable fibrous material. (Emphasis added.)

Each of the Benner patents also discloses incorporating abrasive into this open, loose, flimsy web by several methods, including spraying an adhesive-abrasive binder mix and roll-coating. After the open web is completed, Benner then states that "it is ready to be compacted to a greater density for added strength."

The Hurst patent cited in the Hoover specifications, No. 2,284,738, is a companion to Hurst Patent No. 2,284,739, previously discussed herein. Hurst No. '739 is a method patent, whereas No. '738 covers a product.

Hurst patent No. '738 is stated by plaintiff as teaching a compacted structure as its end product. While this may be correct, if Hurst '738 is read in the light of Hurst '739, the patent itself describes no compressing or compacting step in the creation of the product, and the degree of compaction and density of the finished product is not spelled out therein. The Court considers as relevant to the state of the art prior to the date of the Hoover patent the following disclosures in Hurst:

> The carded membranes are formed webs of loosely adhering independent fibers and may consist of any animal, vegetable, mineral or synthetic fibrous material capable of being carded into web form.
>
> * * * * *
>
> Generally, a suitable adhesive binder is then applied to the web to bond the consolidated fibers together at their intersections and produce adhesive gussets at such intersections.
>
> In the manufacture of abrasive articles according to the present invention the abrasive grain, as well as

any other modifying agents, may be included in the web after it is formed, *or the abrasive and adhesive binder may be included within the fibrous web structure prior to the consolidation of the web and while the interlocked membranes present numerous interstices between the fibers for reception of the grain and adhesive.*

* * * * *

The abrasive grains may be introduced into the *loosely woven web structure* by first mixing the abrasive grains with a suitable liquid adhesive and applying the abrasive contained adhesive to the web.

* * * * *

Another type of included fibrous web which is suitable for many purposes may be produced by the application of abrasive material into the surface of a previously formed and consolidated web. The abrasive particles may be distributed over the surface of the web and permitted to filter into the interstices thereof or the grain may be projected therein. In either case the grains penetrate the surface and into the interstices where they become lodged between the interwoven fibers and sufficiently well anchored for many abrading operations.[6]

* * * * *

A fibrous base constructed in the manner briefly described above is the type used in forming the abrasive products of the present invention and has the appearance shown in the upper half of figure 3, in which it will be seen that *a multiplicity of the fibers 5 of the base are interwoven and interlocked, leaving between them, however, a multiplicity of interstices 2*, generally of diamond shape, and substantially all of which have gussets 3 formed by the adhesive binder,

---

[6] This simple paragraph from the Hurst '736 specifications very nearly describes the manner in which defendant manufactures the accused products.

these gussets filling in the angles between the fibers *although leaving the interstices.* The present type of fibrous web material is distinct from a matted base of macerated fibers such as is formed from a watery pulp, in which type of base the fibers are softened and weak from the effect of the water and macerating, *and also are matted together with little or no interstitial spaces.*

* * * * *

Figures 2, 6 and 7 show another embodiment of the invention in which the abrasive grain 4 is held within, as well as at the surface of the fibrous web not only by the interlocking fibers 5 but also by incorporating an adhesive binder within the web. Although the adhesive surrounds the fibers of the web and forms gussets in the angles between adjoining fibers, it is not present in sufficient amounts to fill the interstices of the web. *These interstices are left substantially open for reception of the abrasive grain.*

* * * * *

One of the important advantages of the invention is *that an abrasive article made in accordance with the invention has a resiliency and flexibility* which it is impractical to obtain with either paper or cloth.

* * * * *

The base material is a strong, interwoven structure, especially when internally re-inforced by binding materials or like strengthening agents, *but at the same time has interstices which serve to anchor the abrasive particles* much better than can be done when they are superimposed upon the face of a backing and are entirely above the surface.

* * * * *

Claim 1. An abrasive article comprising a fibrous web formed from a plurality of carded fibrous membranes *the individual fibers of which are interlocked and interwoven forming interstices there-between and*

making a substantially unlaminated web structure, the interstices of said web containing included abrasive grains anchored with a suitable adhesive. (Emphasis added throughout.)

It is clearly seen from these excerpts that the Hurst '738 patent describes a fibrous web with substantially open interstices for the reception of abrasive grain, the said grain being capable of application in an adhesive-abrasive binder. While it is correct that Hurst does not describe in detail an open, lofty, low-density structure as does Hoover, Hurst does not say that the interstices in his structure are "filled" by abrasive. He describes and claims a web which contains abrasive grain within the interstices, anchored to the adjacent fibers. The Hurst '738 patent does not, on its face, as clearly teach a compacted structure as do the Benner patents.

While the Court does not believe that it would be correct to state that Hurst '738 directly anticipates the patent in suit, the Court is of the opinion that it is likewise incorrect to consider the said patent as pointing away from the Hoover concept. Certainly the Hurst structure is not comparable to the hard rubber wheels of the Westcott patents, and should not properly be viewed in the same light.

This leaves for consideration the patent to C. R. Loeffler, No. 2,327,199, dated August 17, 1943. Although plaintiff has consistently endeavored to downgrade the importance of the Loeffler patent in the course of this trial, the Court is of the opinion that it is among the most significant of the prior art patents. This impression would appear to be somewhat supported by the fact that of the six patents referred to in the Hoover specifications, Loeffler was the one selected by the draftsman of the patent application for extended discussion therein. Due

to the importance which the Court believes attaches to the Loeffler patent it is appended hereto as an exhibit.

The Loeffler patent is the subject of considerable controversy between the parties, starting with the question of its presentation to the Patent Office.

It is plaintiff's position that the Loeffler patent has been considered and rejected by the Patent Office as prior art, thereby strengthening the statutory presumption of validity under 35 U.S.C. § 282, *Firestone v. Aluminum Co. of America*, 285 F.2d 928 (CA 6, 1960).

Defendant, on the other hand, contends that plaintiff was guilty of a willful misrepresentation and distortion of Loeffler in the Hoover specifications, thereby destroying any presumption of validity that the Hoover patent carries.[7] *Amerline Corp. v. Cosmo Plastics Co.*, 153 U.S.P.Q. 707, 716 (D.C. N.D. Ill., 1967).

In the Hoover specifications the Loeffler patent is cited with the other prior art patents heretofore discussed, which as a group were stated to be antithetical to an extremely open abrasive structure of extremely low density. In the particular discussion of Loeffler in the Hoover specifications it is stated that the fibers of the Loeffler pad are "impregnated apparently completely in the outer portions thereof with resin and abrasive," (Col. 2, Lines 35-37), that a center core free from resin or abrasive "is provided for the purpose of allowing some resilience in the resulting structure," (Col. 2, Lines 36-40), and that in the manufacture of the article it is impregnated, then compacted and then cured (Col. 2, Lines 40-43). It is this

---

[7] It should be noted that the responsibility for this alleged misrepresentation is not attributed to the inventors, but rather to those persons in plaintiff's patent department who drew up the application.

Court's opinion that the inclusion of Loeffler in a general category with prior art patents such as those to Westcott and Benner was not proper, and that the specific statements made regarding Loeffler are incorrect.

In describing the finished product to be achieved in accordance with his invention, Loeffler states:

> The thus hardened and insoluble binder strongly adheres the abrasive grain to filaments of fibrous material, *and yet leaves the mass of abrasive coated filaments in the outlying zone B of the body mass still of somewhat open or porous texture, and such zone sufficiently resilient to substantially conform its exterior face* to a surface to which the wad is applied and over which it is rubbed for scouring effect in use. (Emphasis added.)

In Claim 1 of Loeffler he claims a product created from a "substantially non-compacted body of non-metallic fibrous material." Claim 2 describes a finished product with "the thus coated filaments forming *an external abrasive mass of substantially open texture* surrounding said central elastic core portion." From the foregoing it is clear that the representation in the Hoover specifications that the outer portion of the Loeffler structure is completely impregnated with resin and abrasive is incorrect. It would be equally erroneous to suggest that Loeffler teaches a dense product, when he in fact claims a pad with a substantially open exterior face.

The suggestion that the center core of Loeffler "is provided for the purpose of allowing some [indicating a mild degree] resilience in the resulting structure" is rebutted by Loeffler's statement that the outer portion of his structure is itself resilient. He in fact states that the resiliency of his product is "further assured" by the inner core.

Finally, as to the recitation of the manner of producing a Loeffler product, the Hoover patent specifications in describing Loeffler, omit an intermediate step of partial drying before the structure is molded and cured to its final form.

It is, therefore, this Court's conclusion that the characterization of Loeffler in the Hoover specifications is totally incorrect. Whether or not this was intentional is immaterial. In the file wrapper of the Hoover applications no reference is made to Loeffler by the Patent Examiner. It must, therefore, be assumed that the description of Loeffler as set forth in the Hoover patent application was accepted by the Patent Examiner. If that is so, he clearly could not have tested the Hoover application in the true light of the prior art. The patent specifications state that the Loeffler conception was exactly opposite to the Hoover conception and included Loeffler in a category with hard rubber bonded wheels such as were disclosed by Westcott.

In addition to teaching a base material for an abrasive pad comprised of an open fibrous wad, Loeffler teaches introducing the abrasive grain into the base material by means of spraying in an adhesive-abrasive binder. (Page 1, Col. 2, Line 37-Page 2, Col. 1, Line 20.) Loeffler states that the preferred base material for his pad was jute waste, although it could be made from various vegetable or mineral fibers adapted to readily entangle together into a more or less loosely matted and compacted mass.

In attempting to distinguish Loeffler from the patent in suit plaintiff relies upon sample constructed by its witness, Robert A. LePage, which produced a product having a hard outer crust with "pinholes" therein, lacking resiliency and conformability. The samples which Mr. LePage made were of a jute base. In reviewing the evidence regarding the manner in which the LePage samples

were made, the Court finds that the steps which the witness described *did not include the intermediate step of partial drying before the pad was molded and cured.* This is the same step omitted in the summary of Loeffler in the Hoover patent specifications. The importance of that omission will be considered hereinafter.

Mr. LePage testified regarding use in his home of other samples he had made from jute based on the Loeffler patent. He stated that:

> The shape of the pad when used on a pot and pan is maintained for just about one use. The problem is that the water gets into the jute, the jute absorbs it, and of course it dries out very slowly, and as a result you get food particles trapped in the pad, the pad loses its shape, and of course it begins to smell very badly.

As to the deficiencies in the performance of the pad, it is clear from Mr. LePage's testimony that they were basically problems arising from the utilization of jute as a base material. In earlier testimony he had stated that jute would be a poor base material for such a pad because of its natural absorbent qualities. It may be recalled that in the original Hoover application, No. 641,714, the use of jute as a base material was stated to be "completely unsatisfactory." * As has previously been noted herein, the solution to the problems encountered by Mr. LePage with his jute scouring pad were set forth in prior art patents covering scouring pads composed of other synthetic materials.

Defendant's witness, Carl H. Rowe, also constructed sample pads according to his interpretation of the Loeffler patent. His samples, however, did not use jute as a base

---

* That statement was not carried over into the later applications.

material but rather had wool and nylon as the base. He testified that in constructing the samples he followed the teachings of Loeffler, simply applying them to these non-woven fibrous webs.

As to the Rowe samples, plaintiff contends that they were not made in accordance with the Loeffler patent without the use of some other knowledge, and that they do not fairly represent the structure disclosed by Loeffler. The record references cited by plaintiff in support of those contentions, however, do not support the conclusions asserted.

As to the contention that the Rowe samples do not fairly represent Loeffler, the only record reference cited in the plaintiff's brief filed herein is a statement by Mr. LePage that in his opinion that was the case.

With regard to the claim that the Rowe samples were made utilizing other knowledge than the disclosures of the Loeffler patent plaintiff has cited a comment of the Court in support of that assertion. What in fact the Court stated was:

> Whether or not he (Rowe) made it in accordance with the Loeffler patent or used some other knowledge he had is something else that the Court is not at this time prepared to make a decision on, but I will permit them into evidence.

To say that the said comment is an indication that other knowledge was used by Mr. Rowe is a distortion of the record.

In further support of this argument plaintiff cites the entire cross-examination of Mr. Rowe and an excerpt from his re-cross examination.

If by the reference to the full original cross-examination of Mr. Rowe plaintiff means to imply that Mr. Rowe used special knowledge in that he used base materials

other than those recommended by Loeffler, the Court cannot accept that contention. It is true that Mr. Rowe did not start out with a mass of jute as did Mr. LePage and as is described in the Loeffler patent. On the other hand, this Court believes that Mr. Rowe did in fact follow the procedures specified in the Loeffler patent in creating the "Regular Method" abrasive pads from the nylon and wool fibrous webs that he used as starting points. The Court does not consider that to be the application of special knowledge by Mr. Rowe, but rather the substitution of materials.

The re-cross examination discloses that Mr. Rowe made two sets of samples: One applying what he believed to be the full teaching of Loeffler; the other omitting from the Loeffler procedure the intermediate step of partial drying before compression and curing.

As to the creation of two sets of samples, one by the "Regular Method" following Loeffler in full and the other by the "Special Method" omitting the intermediate step, Mr. Rowe testified:

> Q. Why did you employ the special method?
>
> A. Well, I wanted to see if it was possible to produce any different type of product or surface by an immediate drying rather than a normal drying. I mean, immediate compression, rather than a normal drying followed by compression.

There was in fact a different type of product produced. The pads produced under the "Special Method" had a hard glazed surface and were comparable in exterior appearance and texture to the jute pad which plaintiff's witness LePage had created based upon his alleged understanding of the Loeffler patent.

The sample pads produced by Mr. Rowe in accordance with the regular method closely resembled the

structures resulting from following the teachings of the Hoover patent as exemplified by certain samples from the plaintiff's early development program of the "Scotch-Brite" product and by the said product as reduced to commercial form. It is the Court's conclusion that the Rowe "Regular Method" samples do represent an accurate application of the Loeffler disclosures to a different type of "mass having a desired degree of stability, and yet affording a resultant body which is open enough in texture to admit of reception, to a desired degree of penetration, of an abrasive binder mix for incorporation therewith and therein." (Loeffler, p. 1, Col. 2, Lines 24-28), producing a finished product of substantially open texture.

This concludes the prior art and leaves for consideration only the questions of prior public use.

PRIOR PUBLIC USE.

The defendants set out as a defense prior public use more than one year prior to the date of the application for patent in the United States, 35 U.S.C. § 102(a). Defendant sought to sustain that defense by proving that the art of the Hoover patent had been practiced by the Fiberbond Company of Chicago, Illinois as early as 1953.

Although this Court is of the opinion that the evidence adduced by defendant is not sufficient to establish an invalidating prior public use under the standards enunciated in *Goodwin v. Borg-Warner Corp.*, 157 F. 2d 267 (CA 6, 1946), nevertheless it is relevant to the question of the obviousness of the Hoover concept.

The record reflects that as early as 1954 Fiberbond was manufacturing a non-woven web on a Rando-Webber machine and binding the fibers thereof with an adhesive. The description of the web produced by Fiberbond reflects that it corresponds with the web used by plaintiff

in the Hoover product, that it also responds to the web described in the Maisel patent, and corresponds to the prebonded web used by defendant Norton as the starting point in the manufacture of its "Bear-Tex" products. It is interesting to note that in 1954 Fiberbond was using the said bonded web for automobile door-panel material, which is the use to which plaintiff was putting the Rando-Webber product when Mr. Hoover first became aware of its existence.

Mr. Joseph J. Klein, who had been President of Fiberbond, testified that the web produced by that concern was an open, lofty, three-dimensional web which was compressible and resilient. He stated that Fiberbond had added "extenders" to the web, in the form of various solid materials. The solids included clay and metallic particles. One of the metallic particles was aluminum oxide, an abrasive material. The purpose of adding the aluminum oxide, however, was not specifically for creation of an abrasive article. The manner of incorporating the solids into the web was by adding the raw material to the adhesive resin and spraying the mix into the web. Mr. Klein stated that after such spraying operation the voids still remained in the web.

Mr. Max Dressler, who has been counsel for Fiberbond, also described the web as open, lofty, three-dimensional, compressible and resilient. He stated that he was familiar with both the Fiberbond product and the Maisel patent, and that:

> "These were fibrous compressible pads which were sold by Fiberbond Corporation of the defendant, which differed from the conventional pad in that they had an additive, included in with the binder, when the binder was sprayed to hold the fibers in a three-dimensional relationship as called for in the Maisel Patent No. 2,784,132."

Dressler characterized the Fiberbond product as having "endless voids; a myriad of voids."

Harry Mednick, who had been general foreman and factory supervisor for Fiberbond, testified as to the manner of production of the Fiberbond structure. He stated that as a web came off the Rando-Webber machine in an open, lofty condition it was sprayed with an adhesive and dried. Mr. Mednick further testified that between the years 1958 and 1960 Fiberbond had, at the request of other concerns, experimented with incorporating grit products into the web for the purpose of developing new commercial products.

As previously stated herein, the concept of the Hoover patent to be tested against the prior art is the combination of abrasive grain with a web material such as is described in the said patent.

Although none of the prior art patents considered and discussed herein specifically taught the combination of a lofty open non-woven three dimensional web exactly as described and claimed in the Hoover patent as the carrying agent for abrasive grain the concept of incorporating abrasive grain into non-woven webs of varying degrees of density was well established in the prior art. This Court believes that to one skilled in the prior art it would have been obvious to incorporate abrasive grain into the web produced by the Rando-Webber.

Mr. Hoover admittedly was not skilled in the relevant prior art. Nevertheless, by his own admission the potential of the web structure produced on the Rando-Webber machine as a base point for new commercial products was immediately obvious to him. He did, however, believe that he had created a new product when he adhesively bonded the open web, when in fact that was the subject of the Maisel patent.

With regard to the Maisel patent, it was obvious to the Fiberbond Corporation personnel who were producing such a web to incorporate solid materials into the web for their own purposes, and others had recognized the possible utility of the web as a carrying agent for other materials and had requested Fiberbond to experiment in that direction.

Application of the general concepts of the Loeffler patent by Mr. Rowe to a web structure resembling that produced on a Rando-Webber resulted in the creation of a finished product closely resembling that of Hoover. The Court believes that Loeffler clearly indicated an abrasive pad of substantially open structure, although not with the particularity of the Hoover patent. It should be remembered that in 1943, when the Loeffler patent issued, nylon waste was not a commercially available product.

Although prior art patents such as those to Benner and Hurst did not teach extremely open structures, they pointed away from hard and dense abrasive structures and, up to the point of final compression of the products disclosed therein, closely paralleled the general concept of Hoover. If the other features of those patents up to the point of compression were applied to a Maisel patent web the end result would approximate that of Hoover.

It is this Court's opinion that the best that can be said for the development of the Hoover structures is that they represented the first commercial embodiment of abrasive grain to an extremely open, lofty, three-dimensional nylon web. The Hoover patent is reflective of that conception.

In order to be entitled to patent protection an invention must have novelty and utility, and be non-obvious. *Graham v. John Deere Co.*, 383 U.S. 1, 14 (1966). Undoubtedly the Hoover structures had novelty and utility,

being the first of their exact kind. That, however, is not sufficient to meet the test of patentability. The third criteria of "nonobviousness" must also be satisfied, *Ludwig Drum Co. v. Solar Musical Instrument Co.*, 376 F.2d 872 (CA 6, 1967), and it is that essential element which is lacking herein.

There can be no invention in an obvious substitution of new materials for old in a known combination. *Seiberling Rubber Co. v. I. T. S. Co.*, 134 F.2d 871, 875 (CA 6, 1943). A peculiarly appropriate precedent cited by defendant in this regard is the decision in *S.O.S. Co. v. Triangle Mfg. Co.*, 156 F. Supp. 665 (D.C. N.D. Ill. 1957), aff'd 253 F.2d 227 (CA 7, 1958), wherein a patent on a plastic scouring pad was held invalid. Therein it was stated:

> Where a patented article, by virtue of a substituted material, differs from the old article in degree of excellence only, where it merely accentuates, or achieves to a greater degree, desirable qualities possessed to a less degree by the old article, *and where the alleged new properties or wider range of uses claimed for the patented article were not unexpected or surprising in view of the known properties or characteristics of the substituted materials*, patentable invention cannot exist. id. at 672. (Emphasis added.)

The particular pertinence of the foregoing can best be appreciated by reference back to the LePage testimony regarding the deficiencies of jute (in the pre-nylon era) and the teachings of the Englund and Rimer patents regarding the inherent advantages of utilizing new plastic synthetics in a scouring pad. See also, *Martin-Marietta Corp. v. United States*, 373 F.2d 972 (Ct. Cl., 1967), wherein the substitution of nylon for an old ingredient producing an improved commercial product was held to lack invention as being an obvious advance in the art.

The Court believes that certain of the contentions made, and arguments advanced, by plaintiff in support of the Hoover patent should be considered herein.

It appears to the Court that plaintiff's basic thesis regarding the Hoover patent is exemplified by the following quote from plaintiff's principal brief:

> The discovery rests upon a concept of floating abrasive grains in space, which is novel to the abrasive art, and qualifies also as invention in the novel means the patent discloses for bringing that concept to realization. Nothing like it appears in the prior art. The inventors, in coming to the invention, traveled boldly in a direction contrary to all that was taught by the prior art.

The rather romantic description of the Hoover structures as "floating abrasive grains in space" is repeated many times in the plaintiff's brief. Likewise, the assertions that the concept is a bold departure in a new direction completely unlike any teaching of the prior art is reiterated in the course of the plaintiff's arguments.

The deficiency in this theory is that it is not supported by the evidence in the record.

In the first instance, it is abundantly clear that the abrasive grains in the Hoover structures do not like stars in the sky, float in space. The grain is quite securely and firmly bound by adhesive to the fibers of the open web. Binding of abrasive grain to web fibers did not originate with Hoover.

The Court believes that the argument that the Hoover structures constituted a totally new avenue of approach to the abrasives field is disproved by the review of the prior art previously considered herein. The movement from the dense hard rubber wheels of Westcott in 1927

to the compressed flexible webs of Hurst in early 1942 to the open structure of Loeffler in late 1943 to the plastic pads of Rimer and Englund in 1945 and 1946 to the usage of the Maisel web by Fiberbond in 1953 does not, in this Court's opinion, point away from the Hoover structures.

The record references relied upon by plaintiff in support of this argument are to plaintiff's own work in the abrasives field and an advertising piece of the defendant.[9] The Court does not consider these two items of evidence as probative or reflective of the true state of the art prior to the Hoover patent.

Plaintiff contends that nothing that preceded the Hoover structures was constructed in the same manner, functioned in the same way, performed the same services, or met the same needs. While it is true that there were no prior commercial products constructed exactly as plaintiff's "Scotch-Brite" line (the Hoover patent reduced to commercial form), the remainder of this proposition is not supported by the record. There were, and still are, other abrasive products which function in the same way, perform the same services and meet the same needs as does "Scotch-Brite," although the "Scotch-Brite" products may do a better or more efficient job.

A similar argument is the one advanced by plaintiff that the "Scotch-Brite" products have fulfilled long-existing needs. Again, the evidence reflects that the Hoover structures did not fill any existing voids, but rather have replaced to some degree other products in areas in which the nature of the "Scotch-Brite" composition renders it a more efficient cleaning agent.

---

[9] The same advertising material is the sole reference cited by plaintiff in support of the proposition that prior to Hoover the teaching in the abrasives art bent its efforts toward increasing the aggressiveness of its products.

These contentions regarding the commercial aspects of the Hoover structures lead to the argument that the commercial success of the "Scotch-Brite" line is evidence of the validity of the patent in suit. Commercial success, although relevant, is a secondary consideration, *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966), but commercial success without invention will not make patentability. *Great Atlantic & Pacific Tea Co. v. Supermarket Equip. Corp.*, 340 U.S. 147, 153 (1950).

While this record clearly indicates that both the "Scotch-Brite" and "Bear-Tex" products were commercial successes, the record does not prove that such success is attributable to the alleged Hoover inventive concept. It appears to the Court that the vast acceptance of these products is quite likely attributable to utilization of a Maisel type nylon web as a base thereof. The characteristics of the products to which plaintiff points as making them such a success, such as soft and yielding texture, flushability, resistance to rust and disintegration, are all virtues inherent in the open nylon web itself, are identified in the Rimer and Englund patents, and do not represent any contribution by the Hoover inventors to the state of the art.

There is one segment of plaintiff's brief, entitled "The Inventors Encountered, and Solved, Difficult Problems" which the Court believes is reflective of the fact that the creation of Mr. Hoover and his fellow workers was mechanical rather than inventive. The statements made therein must, of course, be considered in light of the testimony by Mr. Hoover that the commercial possibilities of the Rando-Webber lofty, open, three-dimensional web structure were immediately obvious to him when he first saw it, and that abrasive grain was but one of many substances considered for incorporation into the web.

It is argued by plaintiff that the inventors had problems selecting the correct fiber diameter for the web; that they had difficulty with the correct technique of applying the abrasive and adhesive; that problems were encountered in determining the correct abrasive-resin slurry; that the inventors had to determine the best type of fiber for use in the web. Although the Court believes that the seriousness of these problems is slightly overstated by plaintiff, the fact remains that the problems do not relate to the original Hoover conception of introducing abrasive grain into a Rando-Webber produced web, but rather in refining the product to the point where it represented a good commercial product.

Although the resolution of many of these problems is claimed to be revealed in the patent, such as fiber type, length, diameter, void volume, and the like, Mr. Hoover stated that the disclosures of the patent in these regards did not originate with him. From the evidence in the case it is the Court's opinion that the specific disclosures of these details were developed by plaintiff's patent department in the drafting and prosecution of the patent application, and were designed primarily to secure maximum patent protection.

Plaintiff also asserts several times in its brief that all the materials and equipment necessary to create the Hoover product had long been available, needing only creative genius to bring them together. This, in fact, is one of plaintiff's chief arguments. The record reflects, however, that the essential element necessary to make the Hoover structure function, nylon waste in commercially available quantities, was only recently available at the time in question, and that the Rando-Webber machine on which the basic web was produced was not on the market until the late 1940's or early 1950's. This contention, there-

fore, that all the ingredients were long available to the prior art cannot be sustained on the record herein.

Having concluded that the patent in suit is invalid, this Court is not required to pass on the issue of infringement, *Roberts v. General Motors Corp.*, 228 F.2d 94, 101 (CA 6, 1955). Nevertheless, some observations thereon are relevant to the question of validity of the patent.

It is this Court's opinion that many of the "Bear-Tex" products manufactured by defendant[10] do respond to Claim One of the Hoover patent, and if the same were valid would be infringements thereof. And yet, the evidence indicates that the defendants' products are produced in substantial accordance with the prior art.

The starting point of the Norton products is a pre-bonded web, which is referred to in the Hurst Patent No. 2,284,739, substantially similar to that covered by the Maisel Patent No. 2,784,132. This web materia. is then passed through a slurry bath of adhesive-abrasive binder, the process known as roll-coating, during which process the web passes between a pair of pressure squeeze rolls. The roll-coating method of impregnating non-fibrous webs with abrasive, as well as the use of the adhesive-abrasive binder, was disclosed by several of the prior art patents discussed herein. The web is then passed through a drying oven so that the surface solvent is evaporated, and emerges in a tacky condition. At this point the product responds to the concept disclosed in the Loeffler patent and also resembles those described by Benner and Hurst in their patents prior to the compression step. The tacky web, in most cases, is then rolled into a convolute form, cured, and from the rolled product slices are cut to pro-

---

[10] For the purpose of this discussion the Court does not deem it necessary to designate which of the defendants' products would fall within the scope of Claim 1.

duce the commercial pads.[11] The process of creating pads from a convoluted roll is also derived from the prior art. In the course of passing the web between the pressure squeeze rolls in the roll-coating and the winding of it into convolute form there is a degree of compression of the web involved.

It thus appears that while all the steps followed by defendant in the creation of the alleged infringing products can be identified with the teachings of the prior art, Claim One of the Hoover Patent is sufficiently broad as to read on such products. This is but another indication that the patent in suit cannot withstand the test of measurement for nonobviousness in light of the prior art.

It is this Court's finding that United States Letters Patent No. 2,958,593 are invalid for lack of invention.

In view of this finding the Court does not consider it necessary to pass upon the foreign licensing defense which has been asserted herein.

This Memorandum is adopted as Findings of Fact and Conclusions of Law, in accordance with Rule 52 of Federal Rules of Civil Procedure.

/s/ BEN C. GREEN,
United States District Judge.

Dec. 29, 1967.

---

[11] A limited amount of the defendant's product is produced in non-convolute sheet form.

MEMORANDUM OF THE DISTRICT COURT.

Overruling Motions for Judgment and to Amend Findings and Judgment.

280 F. Supp. 697.
Entered January 29, 1968.

IN THE DISTRICT COURT OF THE UNITED STATES

NORTHERN DISTRICT OF OHIO
EASTERN DIVISION.

Civil Action No. 37,154.

MINNESOTA MINING AND MANUFACTURING COMPANY,
Plaintiff,

vs.

NORTON COMPANY,
STUDEBAKER-PACKARD CORPORATION,
HADCO CORPORATION,
Defendants.

GREEN, *J.*

Plaintiff has moved for a new trial herein and also moved that the Court amend its findings and judgment in certain respects. Plaintiff further seeks to reopen the action to take additional testimony concerning the making of certain sample products by its witness, Robert A. LePage.

The entire motion is predicated on the proposition that the Court was led into error by a misinterpretation of the testimony of Mr. LePage as it related to his production of the sample products.

This Court found that in making his samples Mr. LePage omitted an intermediate step recited in the Loeffler patent.

Plaintiff now urges that such finding was erroneous, and in support of that argument has submitted an affidavit

by Mr. LePage in which he states that his method of production did in fact include such intermediate step.

The Court has received the trial testimony of Mr. LePage on this subject and finds that when he was asked to detail his procedures he did not include the intermediate step.

The Court does not believe, however, that the judgment herein would be affected by a resolution of this issue. The Court's conclusion that the patent in suit is invalid was not controlled by, or motivated by, the matter of the LePage samples. That aspect of the case was simply one of the many matters which the Court took into consideration.

Assuming for the purpose of the motion the plaintiff's assertion that Mr. LePage did in fact follow Loeffler, there would remain a conflict between the testimony of Mr. LePage and that of defendants' witness, Mr. Carl Rowe. Each made a product allegedly according to the teachings of the Loeffler patent. The Rowe product corresponded to that of the patent in suit, whereas the LePage product did not. Some of the Rowe products had as the base material nylon waste, a preferred ingredient according to the patent in suit, whereas the LePage product utilized jute waste, a base product which the Hoover inventors stated would be unsatisfactory for the use to which the patent was directed.

It is this Court's conclusion that even if the record generated by plaintiff at the trial on this question was misleading, a change on this point would not alter the Court's overall determination.

Plaintiff's motion denied in all its particulars.

BEN C. GREEN,
United States District Judge.

January 29, 1968.